



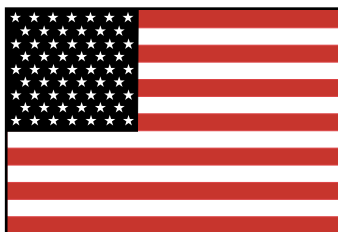
U.S. Department
of Transportation

**Federal Aviation
Administration**

AFS-600
Regulatory Support Division

ADVISORY CIRCULAR 43-16A

AVIATION MAINTENANCE ALERTS



ALERT
NUMBER
302



SEPT
2003

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**U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
WASHINGTON, DC 20590**

AVIATION MAINTENANCE ALERTS

The Aviation Maintenance Alerts provide a common communication channel through which the aviation community can economically interchange service experience and thereby cooperate in the improvement of aeronautical product durability, reliability, and safety. This publication is prepared from information submitted by those who operate and maintain civil aeronautical products. The contents include items that have been reported as significant, but which have not been evaluated fully by the time the material went to press. As additional facts such as cause and corrective action are identified, the data will be published in subsequent issues of the Alerts. This procedure gives Alerts' readers prompt notice of conditions reported via Malfunction or Defect Reports. Your comments and suggestions for improvement are always welcome. Send to: FAA; ATTN: Aviation Data Systems Branch (AFS-620); P.O. Box 25082; Oklahoma City, OK 73125-5029.

AIRPLANES

BEECH

Beech; Model 58P; Baron; Damaged Engine Mount Truss; ATA 7120

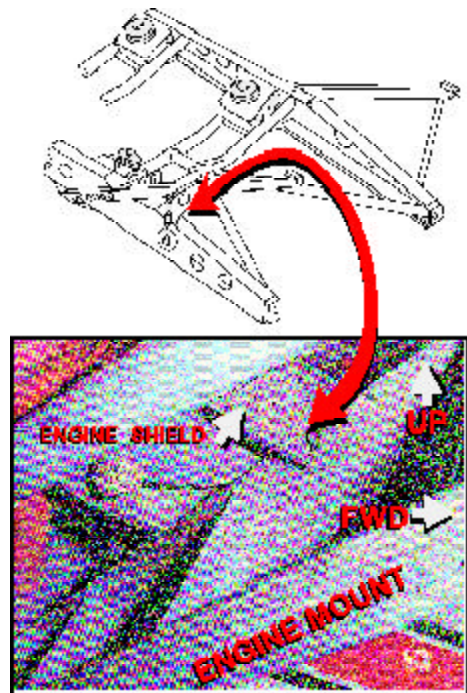
During a phase inspection, the technician noticed that the exhaust heat shield, which is forward of the turbocompressor, had chafed through the engine-mount truss (P/N 102-910026-131).

The technician stated the chafed area was approximately 3/16 inches by 5/16 inches. He stated the damage occurred when the heat shield mount broke and contacted the truss. (Refer to the illustration.)

The submitter stated that this is a common problem. He stated that Beech has an approved repair procedure, which addresses this problem.

A search of the FAA Service Difficulty Reporting Program data base revealed three additional reports with like failures.

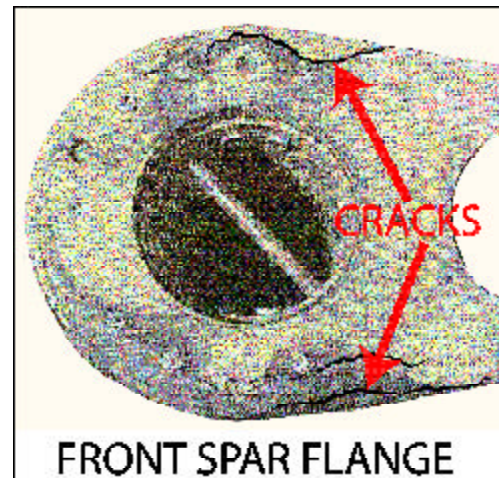
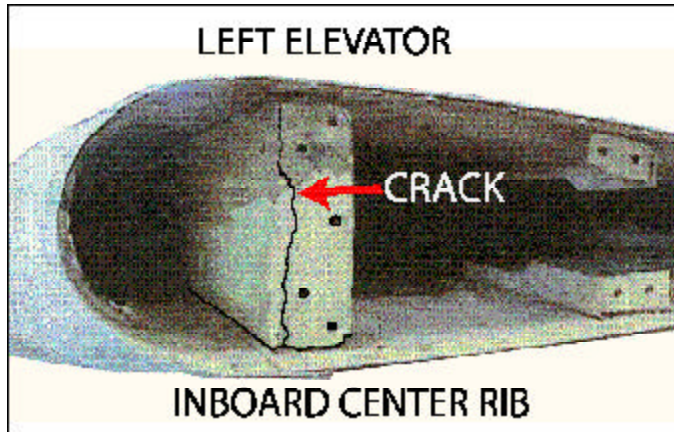
Part total time-7,448 hours.



Beech; Model E-90; King Air; Elevator Structure Failure; ATA 5521

A report in the FAA Service Difficulty Reporting Program data base stated that a technician discovered cracks at the inboard rib (P/N 50-610000-355) of the left elevator. Cracks were also discovered at the front spar flange (P/N 50-610000-387). (Refer to the illustrations.)

Part total time unknown.



CESSNA**Cessna; Model 172; Improper Length Propeller Mounting Bolts; ATA 6110**

According to the submitter, the propeller mounting bolts (P/N A2513-92) on the new Cessna Model 172 seemed to be too short.

The bolts did not extrude through the crankshaft pressed threaded bushing. Usually the threads will extrude two to three threads through the bushing.

The FAA Service Difficulty Reporting Program data base revealed four additional reports citing insufficient length of propeller mounting bolts on Cessna Models 150 and 172.

Part total time-2,371 hours.

Cessna; Model T210; Turbocharger Tailpipe Clamp; ATA 8120

The Airframe and Propulsion & Services (ACE-118W) of the Wichita Aircraft Certification Office (ACO), located in Wichita, Kansas, submitted the following article. (*The article is published as it was received.*)

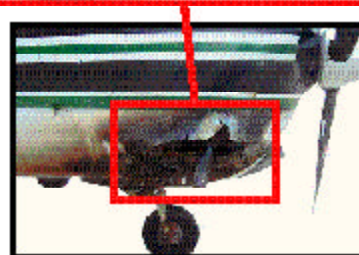
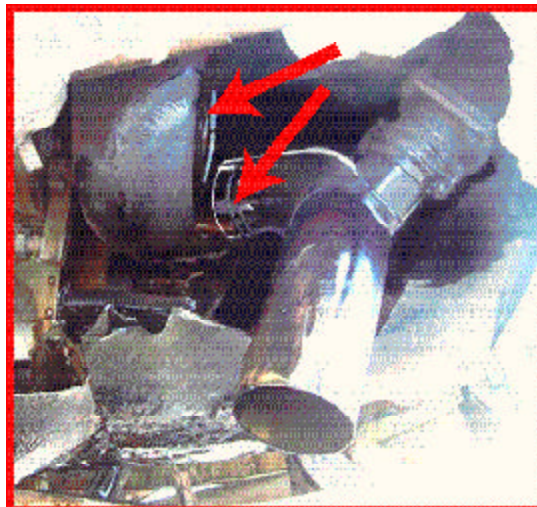
Recently, a Cessna T210N Turbo Centurion airplane made an emergency landing after descent from a cruise altitude of above 10,000 feet as a result of the pilot initially observing electric and hydraulic system malfunctions and then smelling smoke.

Inspection of the airplane on the ground revealed that the engine exhaust tailpipe had separated from the turbocharger. The V-Band clamp used to secure the turbocharger to the exhaust tailpipe was still attached to the turbocharger. The self-locking nut that is torqued to secure the V-Band clamp had loosened enough to allow the tailpipe to separate from the turbocharger. It was determined that the self-locking nut was not the correct type.

This condition has been suspected when other Cessna turbocharger tailpipe separations have occurred. There are Airworthiness Directives on some Cessna airplane models to insure proper attachment of the turbocharger to the tailpipe but not on the Cessna T210 Series airplanes.

The purpose of this Alert is to emphasize the need to use the approved type of hardware, especially on exhaust systems. The pictures are included to further convey this message.

The pilot and three passengers avoided any physical injury on a flight that might easily have resulted in loss of lives.



PIPER**Piper; Model PA-28-181; Archer II; Control Wheel Yoke to Control Column Failure; ATA 2701**

Due to loss of flight control input, the pilot was forced to make an emergency landing on a dirt road, which resulted in severe damage to the aircraft.

The submitter discovered that the screw (P/N MS244694-S59) that holds the pilot's control wheel to the yoke had "backed out," which allowed the control wheel to rotate freely. He believes that the screw is too short and only allows half a thread to protrude through the nut plate. He also discovered that the locking feature of the nut plate had failed.

Part total time-1,802 hours.

Piper; Model PA-31-350; Chieftain; Elevator Trim System Failure; ATA 2731

During the departure, the elevator trim wheel jammed, and the pilot was unable to free the system. The elevator trim was stuck in a nose-down configuration. He was able to counteract the trim pressure and continue to the nearest airport.

The technician discovered the elevator trim jackscrew was bound up at the trim cable drum. After he disconnected the jackscrew from the tab, it functioned correctly.

Due to the accumulative wear in the system, the elevator trim tab jackscrew was in excess of the normal limit, which caused it to jam.

Part total time unknown.

HELICOPTERS

BELL

Bell; Model 407; Oil Cooler Blower Bearing Failure; ATA 6510

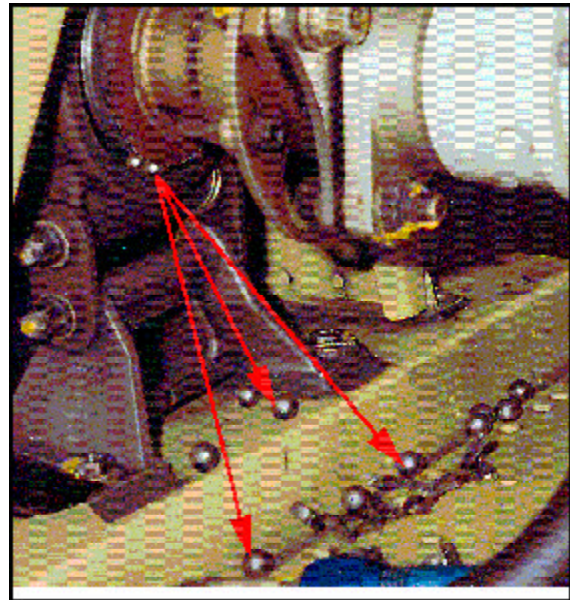
During a routine maintenance inspection, the technician discovered the rear oil cooler fan shaft bearing (P/N 407-340-339-101) had suffered complete failure.

The technician stated the bearing is part of the aircraft tail rotor drive system. He found bearing balls and pieces of the bearing cage on the aircraft oil cooler deck area. One ball from the bearing was lodged in the oil cooler impeller. He discovered that there was very little grease in the bearing pieces and the remaining races. (Refer to the illustration.)

He recommended increasing the intervals between lubricating this area. He also recommended replacing the bearing with a bearing that will withstand the heat that is generated in this area and still retain sufficient lubrication.

The FAA Service Difficulty Reporting Program data base revealed 58 reports that cited bearing (P/N 407-304-339-101).

Part total time-296 hours.



AIR NOTES

ELECTRONIC VERSION OF MALFUNCTION OR DEFECT REPORT

One of the recent improvements to the Flight Standards Service Aviation Information Internet web site is the inclusion of FAA Form 8010-4, Malfunction or Defect Report. This web site is still under construction and further changes will be made; however, the site is now active, usable, and contains a great deal of information.

Various electronic versions of this form have been used in the past; however, this new electronic version is more user friendly and replaces all other versions. You can complete the form online and submit the information electronically. The form is used for all aircraft except certificated air carriers who are provided a different electronic form. The Internet address is:

<http://av-info.faa.gov/isdr/>

When the page opens, select “M or D Submission Form” and, when complete, use the “Add Service Difficulty Report” button at the top left to send the form. Many of you have inquired about this service. It is now available, and we encourage everyone to use this format when submitting aviation, service-related information.

SERVICE DIFFICULTY REPORTING PROGRAM

The objective of the Service Difficulty Reporting (SDR) Program is to achieve prompt and appropriate correction of conditions adversely affecting continued airworthiness of aeronautical products fleet wide. The SDR program is an exchange of information and a method of communication between the FAA and the aviation community concerning inservice problems.

A report should be filed whenever a system, component, or part of an aircraft, powerplant, propeller, or appliance fails to function in a normal or usual manner. In addition, if a system, component, or part of an aircraft, powerplant, propeller, or appliance has a flaw or imperfection which impairs, or which may impair its future function, it is considered defective and should be reported under the program.

These reports are known by a variety of names: Service Difficulty Reports (SDR), Malfunction or Defect Reports (M or D) and Maintenance Difficulty Reports (MDR).

The collection, collation, analysis of data, and the rapid dissemination of mechanical discrepancies, alerts, and trend information to the appropriate segments of the FAA and the aviation community provides an effective and economical method of ensuring future aviation safety.

The FAA analyzes SDR data for safety implications and reviews the data to identify possible trends that may not be apparent regionally or to individual operators. As a result of this review, the FAA may disseminate safety information to a particular section of the aviation community. The FAA also may adopt new regulations or issue airworthiness directives (AD's) to address a specific problem.

The primary source of SDR's are certificate holders operating under Parts 121, 125, 135, 145 of the Federal Aviation Regulations, and the general aviation community which voluntarily submit records. FAA Aviation Safety Inspectors may also report service difficulty information when they conduct routine aircraft and maintenance surveillance as well as accident and incident investigations.

The SDR data base contains records dating back to 1974. Reports may be submitted on the Internet through an active data entry form or on hard copy. The electronic data entry form is in the Flight Standards Aviation web site. The URL is: <<http://av-info.faa.gov>>.

A public search/query tool is also available on this same web site. This tool has provisions for printing reports or downloading data.

At the current time we are receiving approximately 45,000 records per year.

Point of contact is:

John Jackson
Service Difficulty Reporting System Program Manager
Aviation Data Systems Branch, AFS-620
P.O. Box 25082
Oklahoma City, OK 73125

Telephone: (405) 954-6486

E-Mail address: 9-AMC-SDR-ProgMgr@faa.gov

IF YOU WANT TO CONTACT US

We welcome your comments, suggestions, and questions. You may use any of the following means of communication to submit reports concerning aviation-related occurrences.

Editor: Isaac Williams (405) 954-6488

FAX: (405) 954-4570 or (405) 954-4655

Mailing address: FAA, ATTN: AFS-620 ALERTS, P.O. Box 25082,
Oklahoma City, OK 73125-5029

You can access current and back issues of this publication from the internet at:
<<http://av-info.faa.gov>>. Select the General Aviation Airworthiness Alerts heading.

AVIATION SERVICE DIFFICULTY REPORTS

The following are abbreviated reports submitted between July 23, 2003, and August 21, 2003, which have been entered into the FAA Service Difficulty Reporting (SDR) System data base. This is not an all inclusive listing of Service Difficulty Reports. For more information, contact the FAA, Regulatory Support Division, Aviation Data Systems Branch, AFS-620, located in Oklahoma City, Oklahoma. The mailing address is:

FAA
Aviation Data Systems Branch, AFS-620
PO Box 25082
Oklahoma City, OK 73125

These reports contain raw data that has not been edited. If you require further detail please contact AFS-620 at the address above.

FEDERAL AVIATION ADMINISTRATION Service Difficulty Report Data

Sorted by Aircraft Make and Model then Engine Make and Model. This Report Derives from Unverified Information Submitted By the Aviation Community without FAA review for Accuracy.

ACFT MAKE ACFT MODEL REMARKS	ENG MAKE ENG MODEL	COMP MAKE COMP MODEL	PART NAME PART NUMBER	PART CONDITION PART LOCATION	DIFF-DATE OPER CTRL NO.	T TIME TSO
			LIFE VEST	FAILED	05/06/2003	
			KS9P0101	CABIN		
LIFE VEST FAILED, MFG RECOMMENDED CELL PRESSURE TEST IAW 25-60-1. DOM JANUARY 1983			LIFE VEST	FAILED	05/19/2003	
			KS9P0101	EMERGENCY		
LIFE VEST FAILED. MFG RECOMMENDED CELL PRESSURE TEST IAW 25-60-1. DOM: JANUARY 1983			LIFE VEST	FAILED	05/24/2003	
			KS9P0101	EMERGENCY		
LIFE VEST FAILED. MFG RECOMMENDED CELL PRESSURE TEST IAW MANUAL 25-60-1. DOM: MAY 1980			HINGE	CORRODED	06/05/2003	
BEECH			1016200111	ZONE	300	35
MECHANIC NOTICED (PAINT BUBBLING) ON LT OB ELEVATOR HINGE. UPON FURTHER INVESTIGATION BY SCRAPING-OFF THE PAINT BUBBLE, CORROSION WAS FOUND. AN ATTEMPT WAS MADE TO CLEAN AND TREAT AREA, BUT IT WAS FOUND THAT MORE YOU TRIED TO CLEAN CORROSION; MORE METAL WAS BEING REMOVED IN PROCESS. FLAKING OF CORROSION WAS TOO DEEP INTO METAL OF HINGE BRACKET. A NEW HINGE BRACKET WAS ORDERED AND PART WAS REPLACED. HAVE FOUND IT DIFFICULT TO SPOT THESE (BUBBLED PAINT) AREAS. WHEN AREAS ARE SPOTTED, WE SCRAPE-OFF SOME OF PAINT AND RESULT IS SAME, CORROSION AND FLAKING. REPLACEMENT OF PART. IT IS ADVISED THAT OPERATORS OF A/C PAY PARTICULAR ATTENTION TO ELEVATOR HINGE BRACKETS AT THEIR NEXT PERIODIC						
BEECH			HINGE	CORRODED	06/05/2003	
	A200		101-620013-1	ELEVATOR		40
MECH NOTICED (PAINT BUBBLING) ON LT AND RT, MIDDLE ELEVATOR HINGE. FURTHER INVESTIGATION BY SCRAPING-OFF PAINT BUBBLE, CORROSION WAS FOUND. ATTEMPT WAS MADE TO CLEAN AND TREAT AREA, FOUND THAT MORE YOU TRIED TO CLEAN CORROSION; MORE METAAL WAS BEING REMOVED IN PROCESS. FLAKING, CORROSION WAS TOO DEEP INTO METAL OF HINGE BRACKET. NEW HINGE BRACKET WAS ORDERED AND AFFECTED PART WAS REPLACED. A/C WAS RE-PAINTED OVER TWO YEARS AGO. WE HAVE FOUND IT DIFFICULT TO SPOT THESE (BUBBLED PAINT) AREAS. REPLACEMENT OF AFFECTED PART. IT IS ADVISED THAT OPERATORS OF AIRCRAFT PAY PARTICULAR ATTENTION ELEVATOR HINGE BRACKETS AT THEIR NEXT MAINT INSP.						
BEECH			HINGE	CORRODED	06/05/2003	
	A200		1016200121	ELEVATOR		25
DURING CORR INSP, MECH NOTICED "PAINT BUBBLING" ON LT, IB ELEV HINGE BRACKET. FURTHER INVESTIGATION BY SCRAPING-OFF PAINT BUBBLE, CORR WAS FOUND. ATTEMPT WAS MADE TO CLEAN AND TREAT AREA, BUT FOUND THAT MORE YOU CLEANED CORROSION; MORE METAAL WAS BEING REMOVED IN PROCESS. FLAKING, CORR WAS TOO DEEP INTO METAL OF HINGE BRKT. HINGE BRKT WAS ORDERED AND AFFECTED PART WAS REPLACED. A/C ARE KEPT OUTSIDE, THIS IS REASON FOR CORROSION INSP CYCLE. A/C WAS RE-PAINTED OVER TWO YEARS AGO. WE HAVE FOUND IT DIFFICULT TO SPOT THESE "BUBBLED PAINT" AREAS, WHEN AREAS ARE SPOTTED, SCRAPE-OFF SOME PAINT AND RESULT IS SAME, CORR AND FLAKING. RESULT IS REPLACEMENT OF AFFECTED PART. CORR FOUND ON THESE HINGE BRKT.						

BEECH			HINGE	CORRODED	06/05/2003	
	A200		101-640014-13	HINGE		40
DURING A 15-DAY CORROSION INSP, MECH NOTICED "PAINT BUBBLEING" ON MIDDLE RUDDER HINGE BRACKET. UPON INVESTIGATION, CORROSION FOUND. ATTEMPT WAS MADE TO CLEAN & TREAT AREA, BUT FOUND THAT MORE METAL WAS BEING REMOVED IN THE PROCESS. FLAKING, CORROSION WAS TOO DEEP INTO METAL OF THE HINGE BRACKET. A NEW HINGE BRACKET WAS ORDERED AND THE AFFECTED PART WAS REPLACED. AS A NOTE, THE AIRCRAFT ARE KEPT OUTSIDE FOR THE MAJORITY OF THE TIME; THIS IS THE REASON FOR THE 15-DAY CORROSION INSPECTION CYCLE. AIRCRAFT RE-PAINTED 2 YEARS AGO. FOUND IT DIFFICULT TO SPOT "BUBBLED PAINT" AREAS, WHEN AREAS ARE SPOTTED, SCRAPE-OFF SOME OF PAINT & RESULT IS SAME, CORROSION & FLAKING. RESULT IS REPLACEMENT OF BEECH						
	A200		10164001411	RUDDER	06/05/2003	40
MECH NOTICED (PAINT BUBBLING) ON, UPPER RUDDER HINGE BRACKET. ON INVESTIGATION, CORROSION WAS FOUND. FLAKING, CORROSION WAS TOO DEEP INTO METAL OF HINGE BRACKET. NEW HINGE BRACKET WAS ORDERED AND AFFECTED PART WAS REPLACED. WE HAVE FOUNND IT DIFFICULT TO SPOT THESE (BUBBLED PAINT) AREAS, WHEN AREAS ARE SPOTTED, WE SCRAPE-OFF SOME OF PAINT AND RESULT IS SAME, CORROSION AND FLAKING. RESULT IS REPLACEMENT OF AFFECTED PART. IT IS ADVISED THAT OPERATORS OF A/C PAY PARTICULAR ATTENTION TO RUDDER AND ELEVATOR HINGE BRACKETS AT THEIR NEXT PERIODIC MAINT INSPECTION. CORROSION FOUND ON THESE HINGE BRACKETS HAS BEEN DISCOVERED IN ADDITION TO HINGE BRACKET CORROSION.						
BEECH			PITCH HORN	CORRODED	06/05/2003	14112
	C12C		101-610019-1	ELEVATOR		25
DURING A 15-DAY CORROSION INSPECTION, A MECHANIC NOTICED "PAINT BUBBLING" ON THE LT ELEVATOR CONTROL PITCH HORN. UPON FURTHER INVESTIGATION BY SCRAPING-OFF THE PAINT BUBBLE, PITTING CORROSION WAS FOUND. AN ATTEMPT WAS MADE TO CLEAN AND TREETAT THE PITTED AREA, BUT IT WAS FOUND THAT THE PITS WERE TOO DEEP INTO THE METAL. A NEW PITCH HORN WAS ORDERED AND THE AFFECTED PART WAS REPLACED.						
BEECH			MOTOR	INOPERATIVE	05/17/2003	
			F33A	VACUUM PUMP		
PILOT REPORTED STANDBY INSTRUMENT AIR PRESSURE INOPERATIVE. ON FURTHER INVESTIGATION FOUND STAND BY VACUUM PUMP DRIVE MOTOR FAILED. RECOMMEND OPERATING SYSTEM AT EACH PHASE INSPECTION.						
BELL			VALVE	LEAKING	04/09/2001	
	206L1		206063650001	FUEL SYSTEM		
LEAKING FUEL VALVE. REPLACED WITH SERVICEABLE PART.						
BELL			INDICATOR	DAMAGED	04/18/2001	
	206L1		1740352	ENGINE OIL		
BUTTON WOULD NOT EXTEND DURING BYPASS CHECK. REPLACED WITH SERVICEABLE PART.						
BELL	ALLSN		STARTER GEN	INOPERATIVE	01/02/2003	502
	206L1	250C*	23081018	ENGINE		
GENERATOR FAILED PILOT PERFORMED CAUTIONARY LANDING. MECHANIC INSPECTED AND REPLACED AIRCRAFT BATTERY AND STARTER GENERATOR. AIRCRAFT WAS THEN RETURNED TO SERVICE.						
BELL	ALLSN		SCAVENGE	INOPERATIVE	01/02/2003	5989
	206L3		250C30	GEARBOX		
DURING BUCKET SLING TRAINING, AIRCRAFT STARTED SMOKING. PILOT PERFORMED PRECAUTIONARY LANDING AND OVERTORQUED AIRCRAFT. MAINTENANCE WAS NOTIFIED AND DISPATCHED TO RETRIEVE AIRCRAFT FROM LOCATION. AIRCRAFT ENGINE WAS INSPECTED AND FOUND TTHAT THE NR 8 SCAVENGE PUMP WAS NOT FUNCTIONING. GEARBOX WAS REPLACED AND OVERTORQUE INSPECTION WAS PERFORMED. AIRCRAFT WAS THEN RETURNED TO SERVICE.						
BELL			LINE	LEAKING	05/27/2003	
	222U		430201407	FUEL SYS		
PUMP LEAKED FUEL BADLY FROM BOTH ENDS WHEN INSTALLED. NEVER PUT INTO SERVICE. 8130 AND HISTORICAL RECORD CARD ENCLOSED. REMOVED FROM ENGINE LE47204. REPLACED WITH SERVICEABLE UNIT.						
BELL			SERVO	LEAKING	04/09/2001	
	412		41005496101	FLT CONTROLS		
SERVO CAUSING EXCESSIVE INTERNAL LEAKAGE DURING TESTING.						
BELL			ROTOR HEAD	VIBRATION	04/10/2001	
	412		PH141294	TAIL ROTOR		
TAIL ROTOR PRODUCING A HIGH FREQ VIBRATION. REPLACED WITH SERVICEABLE PART.						
BELL			CABLE DRUM	STRETCHED	04/10/2001	
	UH1H		205001706009	FLT CONTROLS		
CABLE DRUM STRETCHED.						
CESSNA	CONT		LINE	CORRODED	05/05/2003	3861
	140	O200*	040010629	OIL PRESS IND		
THE OIL INDICATOR LINE WAS WORN COMPLETELY THROUGH. THE CIRCUMSTANCES UNDER WHICH IT OCCURED, WAS DURING FLIGHT. PROBABLE CAUSE: OLD AND CORRODED. RECOMMENDATION TO PREVENT RECURRENCE: CLOSER INSPECTIONS OF ENGINE, AND ENGINE PARTS/ COOMPONENTS.						
CESSNA	LYC		CYLINDER	WORN	05/23/2003	137
	152	O235N2C	05K23038	ENGINE		
WITH 137 HOURS ON THIS ENGINE THE OIL CONSUMPTION WENT UP. ON INSPECTION OF THE ENGINE, OIL WAS FOUND ON NR 1 AND NR 3 CYLINDER SPARK PLUGS. ALL FOUR CYLINDERS WERE REMOVED AND THE OIL CONTROL RINGS WERE FOUND BROKEN ON CYL NR 1 AND NR 3. THE CYLINDER WALLS WERE BADLY WORN AND A WEAR STEP COULD BE FELT AT THE BOTTOM TRAVEL OF THE PISTON. THE WEAR WAS WORSE IN NR 1 AND NR 3 CYLINDER. BUT WAS PRESENT ON ALL FOUR CYLINDERS. THIS IS THE THIRD ENGINE IN FLEET FOUND IN THIS CONDITION IN THE PAST TWO WEEKS. SINCE ALL CYLINDERS WERE MFG IN THE SAME TIME FRAME IT SEEMS THAT IT MIGHT BE A BAD BATCH OF CYLINDERS FROM THE FACTORY. THIS ENGINE WAS REBUILT ON 2/21/03.						
CESSNA	LYC		CYLINDER	WORN	05/23/2003	
	152	O235N2C	05K23038	ENGINE		
ENG WAS REMOVED AT 353.2 HRS SMOH AND WAS SENT BACK TO MFG FOR REPAIR DUE TO METAL IN THE OIL. AT 779.5 HRS METAL WAS FOUND IN OIL SYS. WE REPLACED ALL FOUR CYLINDERS AND CONNECTING ROD ASSY. GROUND RUN AND TEST FLIGHT CHECKED GOOD. ATT 981.6 HRS TSO AND 202.1 HRS REPLACED CYLINDERS ASSY, OIL CONSUMPTION INCRESSED. WHEN SPARK PLUGS WERE CHECKED, OIL WAS FOUND ON NR 1 AND NR 4 SPARK PLUGS. REMOVED NR 1 CYLINDER AND FOUND OIL CONTROL RING BROKEN AND CYLINDER WALL BADLY WORN AND WEAR STEP COULD BE FELT AT BOTTOM TRAVEL OF PISTON. REMOVED THE NR 4 CYLINDER AND FOUND TO BE WORN BUT NO BROKEN RING. ALL CYLINDERS WERE MFG IN SAME TIME FRAME. IT SEEMS THAT IT MIGHT BE A BAD BATCH OF CYLINDERS FROM						

CESSNA	LYC		CYLINDER	WORN	05/23/2003	5237
	152	O235N2C	05K23038	ENGINE		490
PROBLEM WITH HIGH OIL TEMP ON TEST FLIGHT. AT 280.3 OIL CONSUMPTION INCREASED AND ENG STARTED RUNNING ROUGH, WHEN CHECKING SPARK PLUGS FOUND OIL ON NR 3 CYL PLUG. REMOVED NR 3 CYLINDER FOUND OIL CONTROL RING BROKEN, METAL IN OIL SYS. OON 12/27/02 REPLACED ALL 4 CYLINDERS AND CONNECTING ROD ASSY. GROUND RUN AND TEST FLIGHT CKD GOOD. AT 490.7 HRS SMOH AND 210.4 HRS SINCE WE REPLACED CYL ASSY, OIL CONSUMPTION INCRESSED. WHEN SPARK PLUGS WERE CHECKED, OIL WAS FOUND ON NR 3 SPARK PLUG. REMOVED NR 3 CYL, FOUND OIL CONTROL RING BROKEN AND CYL WALL BADLY WORN AND WEAR STEP COULD BE FELT AT BOTTOM TRAVEL OF PISTON. REMOVED OTHER CYL AND FOUND THEM ALL TO BE BADLY WORN. ALL CYL WERE MFG IN SAME						
CESSNA	CONT		BEARING RACE	WORN	06/03/2003	35
	172	O300*	13836	MLG WHEEL		
MAIN LANDING GEAR WHEEL BEARING CUPS SHOWS SIGNS OF FAILURE BY SCUFFING. THIS APPLIES TO BOTH INNER AND OUTER CUPS ON TWO (2) MAIN LANDING GEAR WHEELS FOR A TOTAL OF FOUR (4) FAILURES.						
CESSNA	CONT		BEARING CAGE	DETERIORATED	06/03/2003	35
	172	O300*	13889	MLG WHEEL		
MAIN LANDING GEAR WHEEL BEARING CUPS SHOW SIGNS OF FAILURE BY PITTING. THIS APPLIES TO BOTH INNER AND OUTER CONES ON TWO (2) MAIN LANDING GEAR WHEELS FOR A TOTAL OF FOUR (4) FAILURES.						
CESSNA			MOUNT	DEBONDED	06/05/2003	1752
		172S	S2606-1	WIRE HARNESS		
ON THE NEW C-172 R AND S AIRCRAFT, THE WIRING UNDER THE CABIN FLOOR IS ATTACHED WITH TIE WRAPS TO ADHESIVE BACKED NYLON MOUNTS P/N S2606-1, THAT ARE ADHEARED TO THE AIRCRAFT SKIN. DURING PHASE 3 INSPECTION ON THIS AIRCRAFT WITH 1752.3 HOURS, FOUR MOUNTS WERE UNATTACHED. THE ADHESIVE DEBONDED ALLOWING THE WIRING TO BE UNSECURE. AT STATION 65.33 THE REAR SEAT INTERCOMM WIRES WERE CHAFING ON THE TRIM CABLES. THE UNSECURED NYLON MOUNTS WERE REPLACED WITH ADEL CLAMPS SECURED WITH SCREWS AND NUTS. NYLON ADHESIVE BACKED MOUNTS SHOULD NEVER HAVE BEEN CERTIFIED TO SECURE AIRCRAFT WIRING WITHOUT THE USE OF ATTACH SCREWS. ON OTHER AIRCRAFT, FINDING THE S2606-1 MOUNTS DEBONDING FROM THE						
CESSNA			GPS	FAILED	05/06/2003	300
		177RG	GNS530	COCKPIT		
GPS SCREEN WENT TOTALLY BLANK. UNIT STILL RECEIVING AND TRANSMITTING COMMUNICATION DATA. SCREEN FAILED 2-3 MINUTES AFTER POWER UP. REPORTED THAT HIGH VOLTAGE TRANSFORMER FAILED UNDER IFR FLIGHT						
CESSNA	CONT		CONTROL	FAILED	03/19/2003	4667
	182E	O470*	05131661	COCKPIT		
PILOT SIDE CONTROL WHEEL FAILURE ON LANDING FLAIR. BRAKE ON TOP LT CORNER WHERE THE HAND GRIP MEETS THE MAIN CROSS SPOKE. THE BRAKE IS CLEAN AND SHOWS NO SIGN OF CRACKING BEFORE THE FAILURE OCCURED.						
CESSNA			BOLT	BENT	05/10/2003	
		340A	AN414	ELEVATOR PIVOT		
DURING INSPECTION DISCOVERED ELEVATOR PIVOT BOLT TO BE BENT. REMOVED AND REPLACED BOLT WITH NEW AN4-14. CAUSE COULD BE ATTRIBUTED TO GUST LOCK NOT BEING INSTALLED AND ELEVATOR MOVEMENTS WHILE AIRCRAFT ARE PARKED ON THE RAMP.						
CESSNA	CONT		RELAY	FAILED	05/12/2003	
	402C	TSIO520*	99103971	LT STAB WING		
AIRCRAFT LOST ELECTRICAL POWER, AIRCRAFT LANDED WITHOUT INCIDENT. MECHANIC FOUND RT STARTER RELAY FAILED IN ON POSITION. MECHANIC CHANGED THE RELAY, RT STARTER AND AIRCRAFT BATTERY, THEN RETURNED AIRCRAFT TO SERVICE.						
CESSNA	CONT		DISTRIBUTOR	DAMAGED	03/26/2003	450
	P210N	TSIO520P	K3823	MAGNETO		
THIS PRESSURIZED MAGNETO WAS REMOVED AND DISASSEMBLED FOR THE 500 HOUR INSPECTION. ALL OF THE INTERNAL HARDWARE WAS FOUND RUSTED. THE DISTRIBUTOR GEAR, DRIVEGEAR AND DISTRIBUTOR BLOCK WAS FOUND COVERED IN A FILM AND NOTICEABLY SOFTER THAN NEW EXAMPLES. THIS IS A RESULT OF MOISTURE IONIZATION. RECORDS CONFIRM THAT THE MOISTURE FILTER IN THE PRESSURIZATION LINE HAD BEEN REPLACED REGULARLY. AD 88-25-04 ADDRESSES THIS PROBLEM IN EARLIER SERIES MAGNETOS. SHOULD INCLUDE 6300 SERIES						
CESSNA	CONT		DISTRIBUTOR	FAILED	03/26/2003	
	P210N	TSIO520P	K3823	MAGNETO		
THIS PRESSURIZED MAGNETO WAS REMOVED AND DISASSEMBLED FOR THE 500 HOUR INSPECTION. ALL THE INTERNAL HARDWARE WAS FOUND RUSTED. THE DISTRIBUTOR GEAR, DRIVE GEAR AND DISTRIBUTOR BLOCK WAS FOUND COVERED IN A FILM AND NOTICEABLY SOFTER THAN NNEW EXAMPLES. THIS IS A RESULT OF MOISTURE IONIZATION. RECORDS CONFIRM THAT THE MOISTURE FILTER IN THE PRESSURIZATION LINE HAD BEEN REPLACED REGULARLY AD 88-25-04 ADDRESSES THIS PROBLEM IN EARLIER SERIES MAGNETOS. SHOULD BE AMENDED TO INCLUDE 6300 SERIES,						
CESSNA	LYC		CONNECTOR	IMPROPER	05/15/2003	
		T182T	TIO540			
THE CONNECTOR FROM AIRCRAFT HARNESS THAT MATS TO THE TURN COORDINATOR HAS IMPROPERLY CRIMPED PINS. THIS FAULTY CONNECTION CAUSES AUTOPILOT WING ROCKING AND CAN CAUSE UNDESIRABLE ROLL RATES DURING						
CESSNA	LYC		SPROCKET	WORN	04/28/2003	788
	T206H	TIO540*	07612101	TRIM WHEEL		
RUDDER TRIM SYST DID NOT SEEM TO BE RESPONDING TO INDICATED TRIM INPUT. INSP OF RUDDER TRIM SYS, IT WAS DISCOVERED THAT TRIM WHEEL SPROCKETS, PN 07612101 WERE NOT SHIMMED CORRECTLY TO ALLOW FOR PROPER ENGAGEMENT OF GEAR TEETH. TWO SPROCKETS ENGAGE AT 90 DEGREES TO EACH OTHER AND WERE BARELY MAKING CONTACT. AS INCREASING TRIM LOAD WAS APPLIED SPROCKETS WOULD SLIP INDUCING AN UNKNOWN ERROR INTO TRIM INDICATOR. SLIPPAGE HAD CAUSED NOTCHES TO WEAR SPROCKET TEETH ALLOWING ADDITIONAL SLIPPAGE TO OCCUR WHEN DECREASINGLY LESS TRIM INPUT FORCES WERE APPLIED. TRIM SYSTEM WAS NOT PROPERLY SHIMMED DURING MFG. PN 0761210-1 SPROCKETS WERE REPLACED AND SHIMMED FOR PROPER						
CESSNA	CONT		CYLINDER	CRACKED	06/02/2003	309
	T210L	IO550*	655465A4	ENGINE		50
DURING ANNUAL ENGINE INSPECTION A MECHANIC NOTED BLUE FUEL STAIN IN THE AREA OF THE NR 1 CYLINDER FUEL DRAIN PORT. BLUE FUEL STAIN WAS REMOVED AND ENGINE FUEL SYSTEM WAS PRESSURIZED. AT THIS TIME FUEL STARTED TO DRIP FROM IN BETWEEN THE FIRRT TWO COOLING FINS NEXT TO THE DRAIN PORT. FURTHER INSPECTION OF THE COOLING FIN AREA WITH A BORESCOPE REVEALED TWO HOLES IN THE CYLINDER CASTING WITH A CRACK IN BETWEEN HOLES.						
CESSNA			BEARING	WORN	05/13/2003	
		U206G	S20103	YOKE GUIDE		
WHILE INSPECTING THE AIRCRAFT, THE PILOTS YOKE TUBE WAS OBSERVED TO HAVE BEEN WORN DUE TO CHAFFING ON THE UNDERSIDE. THE COATING ON THE YOKE GUIDE ROLLER BEARINGS HAD WORN OFF AND THE TUBE HAD WORN ABOUT .3333 OF THICKNESS OF THE TUBE. INN ADDITION TO THE GUIDE BEARINGS THE YOKE TUBE PN 1260142-14 WAS REPLACED. RECOMMEND INSPECTION OF THE BEARINGS TO PREVENT MORE COSTLY PARTS REPLACEMENT.						

GROB			BEARING G120A	FAILED LEVER ASSY	05/12/2003	902
DURING INSPECTION OF AIRCRAFT, FOUND BEARING TO BE FAILING. RETAINING CLIP AND SEAL WERE BEING FORCED OUT OF BEARING. PROBABLE CAUSE IS A DESIGN FLAW IN THE CONTROL SYSTEM, WHICH ALLOWS THE CONTROL ROD DEFLECTION TO EXCEED THE DESIGN LIMIT OF THE BEARING.						
ISRAEL	GARRTT 1125	TFE731*	SLEEVE NAS5213215	LEAKING WATER	04/15/2003	2190
CLAMP ATTACHING SLEEVE TO WATER SEPERATOR WORKED LOOSE CAUSING SLEEVE TO LEAK AT 5.0 PSI. CREW NOTED LOSS OF COLD AIR FLOW AND INABILITY TO MAINTAIN CABIN PRESSURE IN FULL COLD. PRESSURIZATION WORKED NORMALLY WITH CABIN TEMPS SETTINGS ABOVE FULL COLD. CLAMP MAY HAVE BEEN STRESSED BY REPEATED OVER LIGHTENING. MFG SPECIFIES 20-25 INCH POUNDS TORQUE.						
MAULE	LYC MX7235	IO540*	MASTER 1035	INOPERATIVE PARK BRAKE	05/20/2003	1175
SPRING AROUND MASTER CYLINDER SHAFT HUNG UP TO BURR AND DID NOT EXTEND TO HOLD THE PARKING BRAKE LEVER DOWN AGAINST TOP OF CYLINDER. PREVENTING APPLICATION OF PARKING BARKE BY NATURAL MOTION OF RUDDER PEDAL IN FLIGHT. BRAKE LOCKED DURING FLIGHT UNKNOWN TO PRIOR.						
MOONEY	CONT M20K	TSIO360MB	MAGNETO 6224	MISREPAIRED ENGINE	06/05/2003	
ENGINE WILL NOT RUN ON LEFT MAGNETO. INSPECTION IN THE WORKSHOP REVEALED THAT THE WOODRUFF DRIVE KEY BETWEEN THE DRIVE SHAFT AND DRIVE COUPLING WAS MISSING.						
PIPER	LYC PA2818	O360A4M	OIL COOLER F017641	CRACKED ENGINE	05/15/2003	68
FOUND OIL LEAK ON PREFLIGHT INSPECTION BY STUDENT PILOT. PRESSURE CHECKED OIL COOLER LEAKING AT SEAM ON TOP. THIS IS A WEAK AREA ON THE OIL COOLER, COULD BE CAUSED BY VIBRATION AND NOT USING A BACK UP WRENCH WHEN INSTALLING OIL COOLER HOSSES. RECOMMEND FINDING A REPLACEMENT THAT IS MORE DURABLE.						
PIPER		PA28R2	CONTROL 62701-123	FRAYED AILERON	06/05/2003 95	2048
BROKEN STRANDS ON LEFT BALANCE CABLE WAS FOUND DURING NORMAL MAINTENANCE. CABLE HAS BROKEN STRANDS AT POINT WHERE CABLE WAS INBOARD PULLEY AT WING ROOT. PULLEYS SHOW NO SIGN OF WEAR AND TURN FREELY. THE TOTAL TIME ON THESE CABLES WERE FROM 1049 TO 2058. PROBABLE CAUSE BAD CABLES.						
ROBSIN	LYC R22	O320	TRANSMITTER A5211	INOPERATIVE LOW FUEL	04/06/2003	1798
LOW FUEL WARNING SYSTEM WAS INOPERATIVE: WARNING LIGHT DOES NOT ILLUMINATE WHEN FUEL IS EMPTY. INVESTIGATION REVEALED SYSTEM COMPONENTS OPERATIVE SATISFACTORY, BUT A (BUTT CONNECTOR) REPAIR HAD BEEN MADE ON THE WIRE FROM CIRCUIT BREAKER TOO SYSTEM AT AN UNKNOWN DATE BY AN UNKNOWN PERSON; REPAIR WAS NOT CRIMPED PROPERLY AND WIRE INSIDE INSULATION WAS SEVERED, PREVENTING LIGHT FROM ILLUMINATING. CONDITION COULD NOT BE DETECTED DURING PREFLIGHT BECAUSE THIS SN AIRCRAFT DOES NOT HAVE A (PRESS TO TEST) SWITCH FOR THIS SYSTEM, UNLIKE LATER MODELS, WHICH DO HAVE THIS TEST SWITCH. IN COMBINATION WITH INACCURATE FUEL IDICATION SYSTEM, THIS IS A DANGEROUS SITUATION.						
ROBSIN	LYC R22	O320	INDICATOR 624600473	INACCURATE FUEL SYSTEM	04/06/2003	1798
FUEL INDICATION SYSTEM INACCURATE: GAUGE READS .1875 FULL WHEN TANK IS EMPTY. REPLACED TRANSMITTER WITH OVERHAULED UNIT AND PROBLEM REMAINED THE SAME. ACCURACY OF SYSTEM SHOULD BE VERIFIED AT EACH ANNUAL OR 100-HOUR INSPECTION.						
UROCOB	TMECA EC120B	ARRIUS2B1	DISC C632A2108102	FAILED ROTOR BRAKE	05/21/2003	1068
FOUND DURING 500-HOUR INSPECTION. INSPECTION CHECK WIGH DIAL INDICATOR REQUIRED DISASSEMBLY. SPLINES INSPECTED AND MEASURED WITH PINS. BEYOND LIMITS, PART REJECTED. NOTE: ROTOR BRAKE DISC FREE FLOATS ON THIS SPLINE ASSEMBLY. WEAR STEP ONLY IN AREA DISC RIDES.						

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION MALFUNCTION OR DEFECT REPORT		OPER. Control No.		8. Comments (Describe the malfunction or defect and the circumstances under which it occurred. State probable cause and recommendations to prevent recurrence.)	DISTRICT OFFICE OTHER COMPUTER FAA MFG. AIR TAXI MECH. OPER. REPSTA.	OPERATOR DESIGNATOR SUBMITTED BY: TELEPHONE NUMBER () -
		ATA Code				
		1. A/C Reg. No. N-				
Enter pertinent data	MANUFACTURER	MODEL/SERIES	SERIAL NUMBER			
2. AIRCRAFT						
3. POWERPLANT						
4. PROPELLER						
5. SPECIFIC PART (of component) CAUSING TROUBLE						
Part Name	MFG. Model or Part No.	Serial No.	Part/Defect Location.			
6. APPLIANCE/COMPONENT (Assembly that includes part)						
Comp/Appl Name	Manufacturer	Model or Part No.	Serial Number			
Part TT	Part TSO	Part Condition	7. Date Sub.	Optional Information: Check a box below, if this report is related to an aircraft <input type="checkbox"/> Accident; Date _____ <input type="checkbox"/> Incident; Date _____		

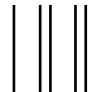
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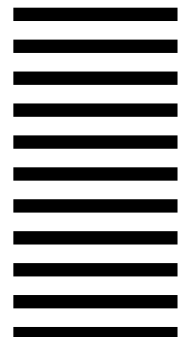
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